

We claim:

1. A random access reagent supply system having a single bi-directional linear shuttle adapted to position different reagent containers at different locations within a clinical analyzer by moving reagent containers between a reagent container loading tray, at least one reagent server, and at least one reagent carousel.
2. The reagent supply system of claim 1 wherein the loading tray includes a motorized rake adapted to automatically position the containers beneath the linear shuttle.
3. The reagent supply system of claim 1 wherein the reagent server comprises a reagent container shuttle, a reagent container tray and a reagent storage area configured so that the reagent container shuttle moves the reagent container tray within the reagent storage area to position the reagent container tray beneath the linear shuttle.
4. The reagent supply system of claim 1 having first and second concentric reagent carousels, the first carousel being inwards of the second carousel, the linear shuttle adapted to move reagent containers between the first and second concentric reagent carousels.
5. The reagent supply system of claim 4 further including a first reagent container transfer device proximate the second concentric reagent carousel to transfer reagent containers from the second concentric reagent carousel to a reagent preparation station.
6. The reagent supply system of claim 4 further including a second reagent container transfer device proximate the second concentric reagent carousel to transfer reagent containers from the second concentric reagent carousel to a motorized belt shuttle.
7. An automatic chemical analyzer comprising the reagent supply system of claim 1 and further comprising a reaction carousel having cuvette ports

formed therein to receive a plurality of reaction cuvettes, and reagent aspiration and dispense arms to aspirate reagents from reagent containers in the reagent carousel and in the reagent server and to dispense reagents into the reaction cuvettes.